**PETITION UNDER 37 CFR 1.313(b)(5)****CERTIFICATE OF FACSIMILE**

I hereby certify that this correspondence is being via facsimile transmission on the date shown below to: (703) 872-9306, addressed to Petitions, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: May 26, 2004

Sonia V. McVean  
Sonia V. McVean

Patent  
36856.743

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Takahiro OGUCHI	Art Unit: 2823
Serial No.: 09/548,414	Examiner: J. Garcia
Filed: April 13, 2000	
Title: METHOD OF MANUFACTURING AN EXTERNAL FORCE DETECTION SENSOR	

**INFORMATION DISCLOSURE STATEMENT**

U.S. PATENT AND TRADEMARK OFFICE  
2011 South Clark Place  
Customer Window, Mail Stop 313(c)  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

Dear Sir:

Pursuant to 37 C.F.R. § 1.56, submitted herewith are copies of four (4) references cited in the enclosed search report issued in a corresponding German patent application.

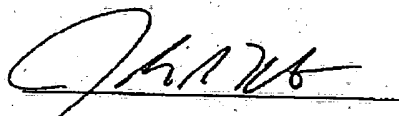
For the Examiner's convenience, we have enclosed a completed Form PTO-1449. The statement is not a representation that all of the information cited is necessarily effective as prior art against the application.

U.S. Serial No. 09/548,414  
May 26, 2004  
Page 2 of 2

I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this statement, and that this is the first citation of these prior art references by a foreign patent office in a counterpart foreign patent application. Accordingly, no fee is necessary for the filing of this statement. Should the Commissioner determine otherwise, the Commissioner is authorized to charge Deposit Account No. 50-1353 for any fee shortages, including the petition fee under 37 C.F.R. § 1.17(p).

Applicant(s) respectfully request(s) that the disclosed reference(s) be made of record in the subject application.

Respectfully submitted,



Attorneys for Applicant(s)

Joseph R. Keating  
Registration No. 37,368

Christopher A. Bennett  
Registration No. 46,710

KEATING & BENNETT LLP  
10400 Eaton Place, Suite 312  
Fairfax, VA 22030  
(703) 385-5200

PTO/SB/08A (04-03)

Substitute for form 1449/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**(Use as many sheets as necessary)**

Sheet	1	of	1
-------	---	----	---

**Complete If Known**

Application Number	09/548,414
Filing Date	April 13, 2000
First Named Inventor	Takahiro OGUCHI
Art Unit	2823
Examiner Name	Joannie GARCIA
Attorney Docket Number	36856.743

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

**Examiner  
Signature**

**Date**  
**Considered**

\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered, include copy of this form with next communication to applicant.

<sup>1</sup> Applicant unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Abstract is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14.

Schoppe, Fritz, Dipl.-Ing.  
 Schoppe, Zimmermann, Stöckeler & Zinkler  
 Patentanwälte  
 Postfach 246  
 82043 Pullach bei München  
 ALLEMAGNE

Datum/Date

07.05.04

Zeichen/Ref./Réf. <b>MT000405PEP</b>	Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n° <b>00108261.9-2203/</b>
Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire <b>Murata Manufacturing Co., Ltd.</b>	

## COMMUNICATION

The European Patent Office herewith transmits the partial European search report under Rule 46(1) EPC relating to the above-mentioned European patent application.

Copies of the documents cited in the search report are enclosed.

The applicant's attention is drawn to the following:

The search Division informs the applicant that if the European search report is also to cover inventions other than the invention first mentioned in the claims, a further search fee must be paid for each of these inventions, within ONE MONTH after notification of this communication.

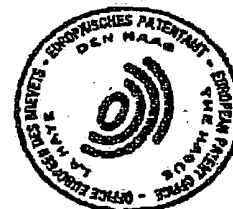
If the application has been filed up to 30 June 1999, the search fee in force before 01 July 1999 (EUR 889,-) or the equivalent applicable on the date of payment is payable.

This applies also to the search fees requested under Rule 46(1) EPC.  
 See also OJ EPO 06/1999, 405.

☐ The abstract was modified by the Search Division and the definitive text is attached to the present communication.

☐ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

FRISTENDE	17.06.04	bs
VOR- 1.	08.06.04	bs
FRIST 2.		
BELEG		



### Note to users of the automatic debiting procedure:

Unless the EPO receives prior instructions to the contrary, the search fee(s) will be debited on the last day of the period for payment. For further details see the Arrangements for the automatic debiting procedure, Supplement to OJ EPO 02/1999.

REGISTERED LETTER

EPO Form 1507.2 (07.99)



European Patent  
Office

# PARTIAL EUROPEAN SEARCH REPORT

under Rule 46, paragraph 1 of the European Patent Convention

Application Number

EP 00 10 8261

## DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	DE 196 10 782 A (BOSCH GMBH ROBERT) 25 September 1997 (1997-09-25) * the whole document *	1,10-12	G01P15/08
X	DE 197 15 194 A (DENSO CORP; NIPPON SOKEN (JP)) 30 October 1997 (1997-10-30) * column 12, line 56 - column 14, line 3; figures 16,17 *	1,10-12	
A	US 5 343 064 A (SPANGLER LELAND J ET AL) 30 August 1994 (1994-08-30) * figure 10 *	1	
A	DE 44 42 023 A (BOSCH GMBH ROBERT) 30 May 1996 (1996-05-30) * figure 1 *	1,10-12	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B81C B81B G01C G01P

## LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

The present partial European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.

Place of search

MUNICH

Date of completion of the search

23 April 2004

Examiner

Götz, A

## CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone  
Y : particularly relevant if combined with another document of the same category  
A : technological background  
O : non-written disclosure  
P : intermediate document

T : theory or principle underlying the invention  
E : earlier patent document, but published on, or after the filing date  
D : document cited in the application  
L : document cited for other reasons  
& : member of the same patent family, corresponding document

2  
EPO FORM 1503 03.12 (P4/C27)

European Patent  
Office**LACK OF UNITY OF INVENTION  
SHEET B**Application Number  
EP 00 10 8261

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

## 1. Claims: 1, 10-12

Substrate through-hole etching

## 2. Claims: 2, 3, 8-12

Etch stop on a metal layer on a recessed substrate (see Figs. 1 and 5)

## 3. Claims: 4, 5, 9-12

Substrate through-hole etching involving a dummy substrate (see Figs. 2A-2C)

## 4. Claims: 6, 7, 9-12

Joining a recessed substrate with a substrate having an etch stop layer (see Figs. 3 and 4)

# ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 00 10 8261

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

23-04-2004

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 19610782	A	25-09-1997	DE 19610782 A1	25-09-1997
			US 6008138 A	28-12-1999
DE 19715194	A	30-10-1997	JP 3512968 B2	31-03-2004
			JP 9330892 A	22-12-1997
			DE 19715194 A1	30-10-1997
			US 6010919 A	04-01-2000
US 5343064	A	30-08-1994	NONE	
DE 4442023	A	30-05-1996	DE 4442023 A1	30-05-1996

EPO FORM P4459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82